

What is Claimed is:

1. A gas segregator barrier for electrical switching apparatus including a housing having at least one exhaust vent opening for discharging ionized gases which are developed in response to an electrical fault, said gas segregator barrier comprising:
 - a plurality of at least substantially parallel segregator fins;
 - a transverse dividing member structured to divide said substantially parallel segregator fins into a first portion and a second portion;
 - a plurality of exhaust channels formed between said substantially parallel segregator fins of said first portion;
 - a plurality of gas ducts disposed between said substantially parallel segregator fins of said second portion; and
 - a plurality of baffles in said dividing member structured to quench said discharged ionized gases and to provide fluid communication between the exhaust channels of said first portion and the gas ducts of said second portion.
2. The gas segregator barrier of claim 1 wherein said electrical switching apparatus are a pair of spaced-apart circuit breakers, each of said spaced-apart circuit breakers having a plurality of poles, with each of said poles of one of said spaced-apart circuit breakers having a corresponding opposing one of said poles on the other one of said spaced-apart circuit breakers; wherein said at least one exhaust vent opening is a plurality of exhaust vent openings, with each of said exhaust vent openings for a corresponding one of said poles; and wherein said gas segregator barrier is structured for disposition between said pair of spaced-apart circuit breakers, with each of said exhaust channels being proximate a pair of said exhaust vent openings for a corresponding pair of the opposing poles of said spaced-apart circuit breakers.
3. The gas segregator barrier of claim 1 wherein said gas ducts are structured to segregate ionized gases discharged from one of said poles carrying current of one electrical phase from another one of said poles carrying current of a different electrical phase.
4. The gas segregator barrier of claim 1 wherein said gas ducts include at least one lateral member extending between and integral with said

substantially parallel segregator fins of said second portion, and structured to controllably direct said discharged ionized gases.

5. The gas segregator barrier of claim 1 wherein said baffles include at least one baffle in each of the exhaust channels of said first portion.

6. The gas segregator barrier of claim 1 wherein said baffles comprise a plurality of openings extending through said transverse dividing member.

7. The gas segregator barrier of claim 1 wherein said gas segregator barrier is made of thermoplastic.

8. The gas segregator barrier of claim 1 wherein each of said substantially parallel segregator fins of said first portion includes at least one elongated slot.

9. A panelboard assembly comprising:
a switchgear cabinet including means for mounting electrical switching apparatus;
a pair of spaced-apart electrical switching apparatus mounted to said switchgear cabinet by said means for mounting, each of said electrical switching apparatus including a housing having at least one exhaust vent opening for discharging ionized gases which are developed in response to an electrical fault; and
a gas segregator barrier disposed between said pair of spaced-apart electrical switching apparatus, said gas segregator barrier comprising:
a plurality of at least substantially parallel segregator fins,
a transverse dividing member structured to divide said substantially parallel segregator fins into a first portion and a second portion,
a plurality of exhaust channels formed between the substantially parallel segregator fins of said first portion, with each of said exhaust channels being proximate a pair of said at least one exhaust vent opening for said pair of spaced-apart electrical switching apparatus,
a plurality of gas ducts disposed between said substantially parallel segregator fins of said second portion, and

a plurality of baffles in said dividing member structured to quench said discharged ionized gases and to provide fluid communication between the exhaust channels of said first portion and the gas ducts of said second portion.

10. The panelboard assembly of claim 9 wherein said pair of spaced-apart electrical switching apparatus is a pair of spaced-apart circuit breakers, each of said spaced-apart circuit breakers having a plurality of poles, with each of said poles of one of said spaced-apart circuit breakers having a corresponding opposing one of said poles on the other one of said spaced-apart circuit breakers; wherein said at least one exhaust vent opening is a plurality of exhaust vent openings, with each of said exhaust vent openings for a corresponding one of said poles; and wherein said gas segregator barrier is disposed between said pair of spaced-apart circuit breakers, with each of said exhaust channels being proximate a pair of said exhaust vent openings for a corresponding pair of the opposing poles of said spaced-apart circuit breakers.

11. The panelboard assembly of claim 10 wherein said switchgear cabinet further includes a support wall and a plurality of at least substantially parallel elongated bus bars supported by said support wall, with each of said bus bars carrying a current of a different electrical phase; wherein said means for mounting includes at least one mounting rail and a plurality of mounting tabs for mounting electrical switching apparatus to said at least one mounting rail; wherein said spaced-apart circuit breakers are double-branch mounted within said switchgear cabinet; wherein said mounting tabs secure said spaced-apart circuit breakers to said at least one mounting rail; and wherein said spaced-apart circuit breakers are electrically connected to said bus bars by a plurality of branch strap connectors.

12. The panelboard assembly of claim 11 wherein said gas ducts segregate ionized gases discharged from one of said poles carrying current of a first electrical phase from at least one of said branch strap connectors carrying at least one current of a different second electrical phase.

13. The panelboard assembly of claim 11 wherein said gas ducts segregate ionized gases discharged from one of said poles carrying current of a first electrical phase from at least one of said bus bars carrying at least one current of a different second electrical phase.

14. The panelboard assembly of claim 9 wherein said gas ducts include at least one lateral member extending between and integral with the substantially parallel segregator fins of said second portion, in order to controllably direct said discharged ionized gases.

15. The panelboard assembly of claim 14 wherein said at least one lateral member includes at least one access opening to permit at least a portion of at least one branch strap connector to pass therethrough.

16. The panelboard assembly of claim 9 wherein said baffles include at least one baffle in each of said exhaust channels of said first portion.

17. The panelboard assembly of claim 11 wherein said at least substantially parallel elongated bus bars include first, second and third spaced-apart elongated bus bars carrying current of corresponding first, second and third electrical phases, respectively; wherein said pair of spaced-apart circuit breakers is a pair of spaced-apart, three-pole circuit breakers each having first, second and third poles carrying current of said corresponding first, second and third electrical phases, respectively; and wherein said plurality of gas ducts include a first gas duct structured to controllably direct said ionized gases discharged from the exhaust vent opening of one of said first poles to gust laterally onto said first elongated bus bar, a second gas duct structured to controllably direct said ionized gases discharged from the exhaust vent opening of one of said second poles to gust downward onto said second elongated bus bar, and a third gas duct structured to controllably direct said ionized gases discharged from the exhaust vent opening of one of said third poles to gust laterally onto said third elongated bus bar.

18. The panelboard assembly of claim 17 wherein each of said branch strap connectors carries current of one of said corresponding first, second and third electrical phases for transmission between said first, second and third poles and said first, second and third elongated bus bars, respectively; wherein said first gas duct is further structured to controllably direct said ionized gases discharged from one of said first poles to gust laterally onto at least one branch strap connector carrying current of said corresponding first electrical phase; wherein said second gas duct is further structured to controllably direct said ionized gases discharged from one of said second poles to gust downward onto at least one branch strap connector carrying

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current of said corresponding second electrical phase; and wherein said third gas duct is further structured to controllably direct said ionized gases discharged from one of said third poles to gust laterally onto at least one branch strap connector carrying current of said corresponding third electrical phase.